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LIBRARIES IN THE EMERGING INFORMATION MARKET

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I am honoured, as a mere occasional user, to be speaking for the second time in less than six months to a distinguished audience of the international library community. Perhaps this coincidence is not without significance!

The library sector is not immune from the implications of the increasing use of new electronic technologies and the "information revolution". Although widely reputed - rightly or wrongly - to be conservative, libraries have progressively adopted technical innovations to enable them to perform some of their daily tasks, such as cataloging and inter-library loans, more efficiently.

But it seems that only recently have librarians started to reflect more seriously on the changing rôle of libraries in the emerging information society (where information increasingly becomes a commercial commodity), and on the profound organizational changes - with its dangers and its benefits - which the full application of both the systems and concepts of the new information technologies implies. This widening of horizons of the whole library community is both necessary and welcome - even in a period of economic constraints and cuts in library budgets - in response to rapidly changing requirements and practices on the information dissemination landscape.

The European Communities and their Commission have so far rather neglected the specific needs of libraries in their plans and programmes. They do not even have a declared policy for libraries. This is partly because libraries are national institutions and interlibrary cooperation has been perceived as well served through the library community's own professional associations. But it is also partly because the thinking on the changing rôle of libraries has, by and large, not yet sufficiently matured to reach out beyond the library community itself to general policy makers.

The Commission's actions over the past 10 years have nevertheless indirectly served the European library community and have contributed to this changing scene upon which librarians are now reflecting.

The creation of the information transmission system EURONET-DIANE and the stimulation given to online enquiries and the creation of new online databases and services has provided libraries with new bibliographic tools to serve their users as well as with a public data network infrastructure (now being replaced by interconnecting national networks). These can already be used for a variety of purposes, even though full use of such facilities has not yet been made by libraries for a number of reasons and even if, apparently, less than 10% of document requests made to libraries stem from searches in online bibliographic files. Although set in a somewhat broader context, the more recent do-

cument delivery and electronic publishing experiments sponsored by the Commission constitute another such contribution. Similarly, the effort placed in inciting research and development in new technologies and new infrastructures through programmes such as ESPRIT will also provide, ultimately, new and more flexible tools and options for libraries.

But it was not until last year that libraries came to a policy making forum when the European Parliament called for the creation of a European Community Library by a proposition known as the Schwenke Resolution. This resolution has the advantage of now triggering much discussion as to the kind of follow-up that it can be given.

However, as with other activities of society, the real issues and dilemmas do not lie in the technologies nor the tools themselves, but in the integration of these into the social and economic organization and in the changes in objectives and functions that this integration perpetrates. For example, with the development of information commerce as an economic sector in itself - said to be growing at 20-30% per annum in Europe - the optimal interworking of the public and private sector players in the information arena becomes more and more critical. Libraries, as typical public sector institutions, have the duty to review their integration in the information and knowledge distribution chain and to adjust intelligently.

This process was, we hope, assisted by the advanced workshop hosted by the Commission last November in Luxembourg entitled "The impact of new information technologies on library management, resources and cooperation" where many ideas were exchanged on inter-library cooperation and resource sharing. The very title and programme of that conference are further examples of the orientations that are emerging and the issues the library community perceives need tackling.

ON-GOING COMMISSION ACTIVITIES IN DETAIL

Against this background, let us look more closely at on-going European Commission activities of relevance to libraries.

Since the 1971 Resolution of the Council of Ministers of the European Communities, the Commission has actively promoted the application of new technologies, first to scientific and technical, later to a wider range of information through three consecutive action plans. These actions resulted in the opening in 1980 of the packet-switched data transmission network Euronet providing, in the absence of interconnected national data networks, a telecommunications facility for access to online information at low, distance-independent tariffs throughout the Community and beyond; the connection of some 40 host services offering, altogether, online access to about 500 databases and collectively baptised DIANE; the creation of a number of new databases and databanks in various areas; the carrying out of numerous studies of both sectoral and general interest.

The third action plan initiated two sets of activities of particular relevance to the library community: one, the DOCDEL programme designed to encourage European-wide experimentation in electronic document delivery and publishing; and two, the initial steps defining the APOLLO pilot project - a cooperative effort with the European Space Agency and the participation of the European PTTs to provide high speed document delivery via satellite transmission.

More recently, in November last year, the Council approved a new five-year programme for the development of the specialized information market with a budget of 25MECU. This new programme is designed to improve the information environment and market conditions as well as to improve the supply and quality of European information products and services. It will enable the Commission to pursue the DOCDEL and APOLLO activities started under the previous action plan and to initiate a series of new actions. Six priority areas have been identified for immediate attention under the new programme. Three of these are oriented towards specific areas or types of information: Materials databanks, patents and biotechnology. Three have a more horizontal scope: electronic document publishing and delivery, including image databanks, information for industry (particularly SMEs) and actions to reduce regional discrepancies in information market development.

It is a bit too early to be able to say much about the new programme, but I can expand a little on DOCDEL and APOLLO.

DOCDEL, which started early in 1984, was designed to encourage independent consortia, principally in the private sector, to develop and experiment with new electronic systems of document delivery and electronic publishing. The ground was, of course, carefully prepared by numerous studies. In order to make the best use of limited budgetary resources, the Commission opted for a co-financing mechanism with a contribution of about 22%. As a result of a call for proposals, 10 pilot projects were selected out of some 27 formal responses, representing a modest Community contribution of 3.6MECU. The idea is not that the different experiments should vie with each other for an "ideal" solution - which would be quite unrealistic - but rather that they create a momentum for development, try out technology, encourage compatibility and interworking down the whole information chain, raise in concrete fashion the host of broader issues and problems which will need to be tackled - such as copyright, "information standards", user acceptance, organizational problems - and of course maximise the impact on the specialized information market. The 10 experiments constitute a "package" and fall broadly into the 4 main areas of interest which were identified at the start (although with some overlap):

- electronic document delivery from printed stores including on-line ordering (TRANSDOC - which will experiment with optical disc, amongst other means of storage; EURODOCDEL; the PATENT-BLATT project in Germany)

- electronic publishing with the generation of documents in electronic form by authors (the Electronic magazine of Learned Information; electronic journals in chemistry from the Royal Society of Chemistry; Mathematical Journal Online of the CEA; Electronic newsletters of VNU and Agence A Jour.)
- standardization in the handling of graphics, extended character sets, full text, storage format etc. (Verlag Technische Regelwerke; Mondadori)
- electronic invisible colleges for the rapid circulation of grey literature (NIHE Dublin). We have already mounted a data base, called SIGLE, for this grey literature.

All these experiments are being closely monitored and will be subject to an independent evaluation in the course of 1985-86 following an agreed general methodology and set of criteria.

The results of this kind of experimenting should be of direct interest to libraries in the form of demonstrations and of potential new tools and services to offer their users, particularly for interlending purposes and for full text electronic storage. This is only a small beginning but it will give all interested parties - especially libraries - an early opportunity to build up experience and to study more closely the trends and consequences of electronic publishing and delivery, the feasibility of certain technical options and the economic viability, costs and problems involved. We hope it will also spawn various standards which will facilitate interworking and cooperation.

In spite of Rutherford D. Rogers' axiom that "new forms of information tend to become incremental rather than to displace existing formats", that is, that new storage media will not displace conventional books and journals - the effect of this evolution up-stream and downstream on the functioning of libraries cannot be ignored. Take, for instance, on-demand publishing: Systems such as that proposed by Mondadori to reduce the cost of low print runs on scientific documents such as PhD theses (one of the DOCDEL experiments), will certainly affect the acquisition policies of libraries.

The APOLLO project tackles a problem which is outside the scope of the DOCDEL experiments but of relevance to a number of them as well as to general inter-library lending - that of advanced high capacity, high speed digital transmission of full text documents for which existing data networks are not suitable. Pending the installation of terrestrial broadband telecommunications facilities, the Commission has developed, jointly with the European Space Agency (ESA), EUTELSAT, the Permanent Nucleus of CEPT and interested PTT Administrations, the APOLLO concept for document delivery by satellite. The pilot service is expected to start in 1986, probably using the ECS-2 satellite launched in 1984. ESA is responsible for a 4MECU special technical development programme for equipment and so on which was agreed to by ESA Member States in October 1984. The Commission's role will be to coordinate the first field trials and negotiate the tariffs with the PTTs and EUTELSAT. It will also equip some 20 user-groups with relatively inexpensive receive-only earth stations developed by ESA (the target price is 25KECU each).

At least two trial applications of APOLLO are already on the drawing board. The British Library Lending Division in the UK and FIZ-4 in cooperation with the TIB (Technische Informationsbibliothek Hannover) and DPA (Deutsches Patentamt) in Germany are planning to offer document delivery services via APOLLO. The EURODOCDEL project is envisaging APOLLO for the transmission of certain Community documents. ESA is also thinking to use it for the transmission of images.

This is a perfect opportunity to announce that the Commission is about to publish in the Official Journal a "call for declarations of interest" from organizations wishing to participate in the field trials as user groups. These interested parties could be libraries, documentation centres or other information providing services. They will naturally be expected to operate an APOLLO receive-only earth station provided by the Commission for the trial and/or a document archive. In evaluating declarations of interest, the Commission will concentrate on: the size and relevance of the user group involved; its readiness to participate actively in the evaluation of the system and help solve technical and organizational problems; its prospects for continuing participation without further support from the Community.

It is difficult to predict the future, but, as EURONET-DIANE did for online services and data networks, APOLLO could well be the spark to set off a whole range of new information services and new ways to share resources.

In brief, the era of speculation as to what could or might happen is almost over and that of positive action is just about upon us.

Because the real potential comes from combining telecommunications and computer technology into one vast information handling system - as EURONET has already demonstrated, and as APOLLO will, too, in its way - it is relevant that the Commission has also begun to tackle much broader telecommunications issues and IT standards at European Community level. It has brought together the telecommunications authorities in a forum. There is now general policy agreement on some crucial points such as the need for joint long-range planning (for instance in the introduction of new telecommunications services), for ensuring compatibility of these new services, for some joint R&D, for more openness in the rules for the connection of terminal equipment, for coordinated investment to bring the advantages of advanced telecommunications infrastructures to the less favoured regions of the Community. This is very large-scale and long-range work but we believe it is an essential component of synergy between industry, public authorities and information services.

In quite another vein, we are also employing new electronic technology to tackle the problem of the diversity of natural languages which fragments our European information scene - but also maintains no less than a quarter of our Commission staff at work in the translation and interpretation departments! We are working on terminology databanks (EURODICAUTOM - which is publicly accessible online), electronic so-called pre-translation, using a commercially available system which we have further developed ourselves SYSTRAN, and an R&D programme to produce an

automatic translation system of the "next generation", benefiting from all recent research in expert systems and computational linguistics (EUROTRA).

Last but not least, we now need to complete all these supply, R&D and infrastructure-oriented activities by looking at market problems - that is, on the European scale, all the other obstacles to information flows (mainly of a regulatory nature) which prevent transparency across national boundaries.

On the basis of a discussion paper which will be widely disseminated (ref: SEC(84)1928), we are now opening a broad consultation on policy issues affecting the information market. The objective is to lay the ground for a long-term common policy, or at least a strategy for convergence to favour the development of a strong Community information market.

Some of the issues that will be addressed and that seem liable to distort or hamper the development of the market are: the relationship between the public and the private sectors in the provision of information services, in information flows and in fair competition between the two; legal issues such as data taxation, copyright, liability; international issues related to the information market and the development of Community positions on these issues (such as those presently being raised in OECD, GATT and IBI). Other issues which can strongly influence the information market will also be analysed, such as: the impact of telecommunications and postal policies on information "trade" (eg. rules of access, tariffs structures, availability of new telecommunications services); the impact of new media and products on the economics of the information market; the requirement of specific information format standards.

Initially, the consultation will take the form of studies and workshops on specific topics, the definition of guidelines or codes of practice to present for discussion, fact-finding exercises, discussions with national, international and professional bodies and the creation of a high level advisory group to the Commission.

The library community is aware of and concerned by many of the policy issues that will be raised in this context since, to use the term of Maurice Line of the BLLD, libraries also fall in this "middle ground" between the authors and the publishers on the one side and the users and consumers of information on the other - the area which is, in other words, the battleground of the information market.

THE COMMISSION AND THE LIBRARY COMMUNITY

All these EEC activities set an environment from which libraries, directly or indirectly, should benefit in the long run, even though they do not specifically address library problems, library cooperation or library resource sharing. With the new five-year specialised information market programme, the Commission does, however, have a mandate from Council which could include helping libraries in the Community to get the best possible out of the new technologies - especially for their ser-

vices to users and for their optimal integration in the evolving new information distribution process. That is the reason why the workshop held last November in Luxembourg, co-sponsored by 4 organizations including the Commission, was seen by us as an opportune informal means to assess how far European libraries might wish to cooperate and how far a Community, EEC context could contribute. It was also an opportune forum to initiate discussion on the Schwenke Resolution of the European Parliament calling for the creation of a European Library. The workshop concluded with a number of recommendations not unknown to many people here. They expressed amongst others:

- a favourable response to the idea of the creation of a European Council on Library Resources and the kind of programme it could have,
- an interpretation of the Schwenke Resolution rather as a distributed European library network than a centralized collection,
- the need for improved information exchange and training in connection with new technologies, interesting projects, R&D and
- a request for more consultation in order better to take account of the needs of libraries - both in on-going information and IT programmes and in the solving of horizontal problems where they also affect libraries (such as copyright, standards, sources of financing and telecommunications).

In other words, the main conclusions, as I see them, are that libraries would welcome increased and more effective cooperation at European level, that there is a great deal to be done and that the European Commission does have a direct role to play to stimulate and encourage such cooperation.

How can the Commission in fact contribute?

- . We are already examining the kind of reply that we, as the European executive, should give to the European Parliament on the Schwenke Resolution. In so doing, we are consulting in writing national libraries in the Member States.
- . We can undertake a number of studies, such as the technical feasibility of a decentralized library network, taking account of what already exists in terms of technical options, existing cooperative arrangements and existing resources.
- . We can finally integrate better the requirements of libraries in the on-going programmes in information and information technologies I have described.
- . We can furthermore start a broad consultation process by getting a properly representative group of the library community with which we can dialogue and with which we can develop a specific programme in line with our information market objectives. This programme could incorporate many of the suggestions made and needs expressed during the November workshop - whilst ensuring that we will not duplicate work done elsewhere.

If that is how the libraries of the Community wish to organise themselves to work with us, we can make welcome the creation of a European Council of Library Resources whilst recognizing that such an institution would necessarily need to be set in a broader framework than that of the European Community.

In brief, we are possessed of some resources, some authority to act, and those good intentions with which the road to hell is paved. But I must make it clear that we can and will only act in concert with partners - one or several - who can properly be said to represent the European Community-wide library interest, in whole or in part, and who both will tell us what is needed and contribute to the work. Do we need, for example, some sort of joint European document location machinery accessible to all? Or much more? Or much less? Put more succinctly, we are asking ourselves, what rôle should the library world play in our future actions and thoughts? We are asking the libraries, who are you? What do you want? What will you contribute? We are, if your like, in a state of expectancy; but an offspring needs two parents.